



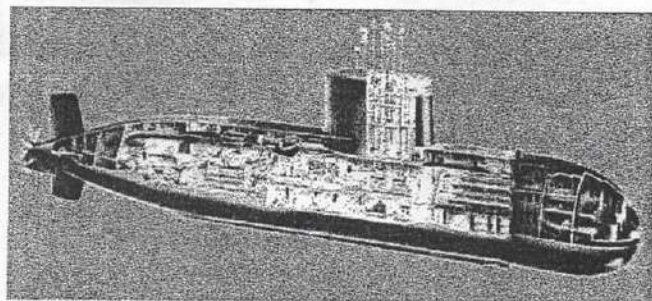
# THE BINNACLE

VICTORIA MODEL SHIPBUILDING SOCIETY  
Box 45083 Mayfair Postal Outlet Victoria BC V8Z 7G9

JUNE 1998

## On the SUBject of.....

Following the recent announcement that DND is buying four new "Upholder" class submarines, Romain's article on building model submarines (page 2) is very topical. Below is a picture of the new sub and the class specifications.



"Upholder" class - Type 2400

Ship	Pennant #	Ship	Pennant #
Upholder	S40	Ursula	S42
Unseen	S41	Unicorn	S43

Displacement: 2,400 tonnes (submerged)

Dimensions:	70.3 x 7.6 x 5.5 metres
Missiles:	Fitted to launch Sub-Harpoon
Torpedo tubes:	6-533 mm (12 reloads)
Speed, knots	12 surfaced, 20 submerged
Range, miles:	8,000 at 8 knots (surfaced)
Complement:	44 (7 officers, 13 sr. & 24 jr, ratings)
Diving depth:	200 metres
Endurance:	49-day food supply



## Dates to Remember

June 11<sup>th</sup> - Meeting - Royal Oak Lions Hall  
Entertainment - FineTuning your models - just in time for Regatta season!  
June 21<sup>st</sup> - REGATTA at Harrison Pond  
July and August meetings at Harrison Pond  
Sept 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> - SAANICH FAIR  
Sept 10<sup>th</sup> - Meeting - Royal Oak Lions Hall  
Entertainment - Ron Wild will demonstrate converting plans to plank on frame.  
Sept 13<sup>th</sup> REGATTA at Harrison Pond

## Regular Events

Every Sunday	Harrison Pond	10.30-1.30
Sundays 1 <sup>st</sup> and 3 <sup>rd</sup>		
	Sailing - Beaver Lake	10.30-3.30
Wednesdays	Harrison Pond	5.30 - 7.30

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## The Sub Subject

The March 12<sup>th</sup> "Model Submarines" presentation to VMSS ended up sandwiched between a top layer of "The Matthew" and an urge to patronize Tim Hortons. No problem, except that the closing heading of the presentation read: "Problems."

In a way this may have been fortunate. The interest shown was not disappointing. Some attendees, in fact, went on overtime to look and ask. That was nice. But some others, so it seemed, looked a tad like attendees when the magician asks for volunteers to climb up to the stage. Them's the ones I wanna get-in spite of what follows.

Model submarines, of course, nudge the top in the problem basket that comes with all model building. These four, however, when conquered, make all others look picayune:

- (1) Leaks
- (2) Trim
- (3) Ballast tank size
- (4) Linkages

The foregoing is a random ranking, and may ultimately depend considerably on the builder's skill/patience, the class/shape of the prototype and access to/availability of both materials and components. For this "Binnacle" let's just go for the leaks.....

As mentioned in March, a model sub can be built dry or wet. The dry species requires permanent (lead?) ballast to allow submergence, and each one of the often numerous hull penetrations has to be sealed to withstand 0.42 lbs.p.s.i. of water pressure for each foot of depth. Not simple and often hernia promoting. So I champion wet boats.

Wet boats, of course (except Wally's?) are not all wet. They have to have a pressure hull (PH) in which to stash all electronics, the motor and nicads - if the latter are the chosen source of juice. The PH, of course, will still sport a number of penetrations, i.e. battery leads, at times the antenna, the stuffing box, and the rods linking servos to rudder, fin, bow planes, stern planes, ballast tank valves and, sometimes, to active periscopes, torpedo and/or missile launchers.

The ruling goal in sealing PH's with an outdoor ballast tank is to KEEP WATER OUT, and not air in. That aim for primarily one-way sealing dictates the manner in which glue or silicone is applied around static penetrations (battery or antenna wires) and the orientation of all seals around rods, stuffing box or drive shaft(s).

Assuming that Lexan or equivalent material is used for the PH's bulkheads and lid or body, the surest way of sealing

static penetrations is to drill an undersized hole, drive an epoxy car-soaked screw through it, cut off the head of the screw, and then solder the wire (can use washer, wire terminal and nut) to the two ends. Antennas are so thin that a hole, chamfered on both sides to make way for the sealant, will usually do the trick. If that's done. Do not overlook sealing the end of the antenna wire, which will reside in the free-flood part of the hull.

For penetrations involving active connectors as listed three paragraphs earlier, I have, so far, exclusively relied on Subtech products, out of New Jersey. Subtech manufactures bulkhead seals (BHS's) and stuffing boxes (SB's) in various diameters and lengths. The BHS is a brass housing, 1/4 inch diameter for inside the PH; 1/2 inch outside, that holds a neoprene seal with a lipped profile. The deeper the boat, the tighter the seal—and also the higher the drag on the rotating or sliding shaft. Subtech's BHS price is \$13.00 US for a four pack. SB's are about the same price—somewhat depending on length.

As an alternative to Subtech's nifty stuff, Coast Industrial Parts, on Dupplin, carries about every size of "O" seal imaginable, together with all sundry grommets and couplings needed. Less expensive than Subtech, but my personal experience is limited to Coast's valves and tubing. Yet, I've operated another bubblehead's model that relies on Coastbought seals. Totally satisfactory. For an SB, though, I'd sooner go Subtech.

That said, the PH's lid and/or access hatch has to be sealed. In conventional designs (mine), it is common to cast an about 1/8 inch thick silicone gasket, on which the lid is pressed down with stainless studs, washers and nuts that are spaced about 1 1/4 inch to 1 1/2 inch. Works fine, as long as the upper surface of the silicone seal is given a thin coating of Vaseline.

Assuming that all of the above steps have combined to yield a tightly sealed PH. It is still good practice to (very) slightly pressurize the PH. A Schroeder valve in the lid and three to five strokes from a bicycle pump will do the job.

Okay, everything is sealed, all is dry. Will it stay that way for long? Yes and no. Between workshop shelf, car trunk and pond, the sub may suffer husky temperature variations. And not all of the glued-together materials expand and contract in harmony. I have yet to solve that happenstance. Meanwhile, that and other problems explain why I said that submarine models take lots of maintenance and repair time between patrols.

Next month, Trim's the topic. Meanwhile, you have my number: 595-4740.

Yours unballasted,

Romain

(The only one, so far)



## Editorial

Well, Summer is upon us at last. As I sit in front of the computer, I am chafing at the bit to get outside and do something. The garden needs work but Harrison Pond is calling..... I am heading off to Albert Head to spend the summer with 400 Cadets. I will be home most nights to sleep, but sleep is probably all I'll have time to do. Soooo, Ron will be helping out with the Binnacle for July and August. Please help him out by sending something for him to print! Thanks to this month's contributors. I hope everyone will come out to the Regatta on June 21st. I will be there - my last day before I start at Albert Head - tug at the ready!

Yours Aye,  
Julie



## From the Bridge

We are half way through the year, so I wanted to revisit my goals to see how we are doing.

### IMPROVE BUSINESS PRACTICES

- Introduce Budget and rationalize fiscal year - done
- Appoint membership secretary - done
- All directors responsible for entertainment - done

### VALUE OF MEMBERSHIP

- More input from members - happening
- Integration of sailing group - needs to be done
- find out what new members need - we work on this

### REGATTAS AND COMPETITIONS

- review our rules - underway
- simplify judging procedures - underway
- ensure everyone knows the rules - will do

So I am getting there. The budget is effective as we worry about money all year rather than when it is too late! The sailing group is smaller than usual this year, so there hasn't been a lot of interaction. It will probably pick up in the fall when sailing season starts.

Discussion of rules for judging (both static and operating) has fallen into two types. Some obvious things were pointed out and no discussion was needed, and they will be fixed. I think there are two issues left. We will be voting on the "open boat" amendment as described in the May Binnacle at the June meeting. The remaining issue will then be whether we go back to

one big regatta where scale and operating are judged and blended. We will discuss/vote on that at the September meeting.

A reminder, the July and August meetings are at Harrison Pond, and there are mini regattas scheduled for June 21 and Sept 13. Please remember also the Saanichton Fair Labour Day Weekend - it is probably the most fun we have at any of our demos!

## Book Review

"THE SHIPS THAT SAVED AN ARMY" - By Russell Plummer

This book is an in-depth evaluation of Dunkirk, June 1940.

When on very short orders, 1300 ships took part in a five day rescue operation, it was a monumental accomplishment.

Ships and boats of all shapes and sizes were commandeered - destroyers, gunboats, freighters, pleasure craft, paddlewheelers - the list goes on and on.

The "Waverly" was one of 23 paddlesteamers that saw action. We had a beautiful R.C. model of the "Waverly" in our club. It was built by John Gough.

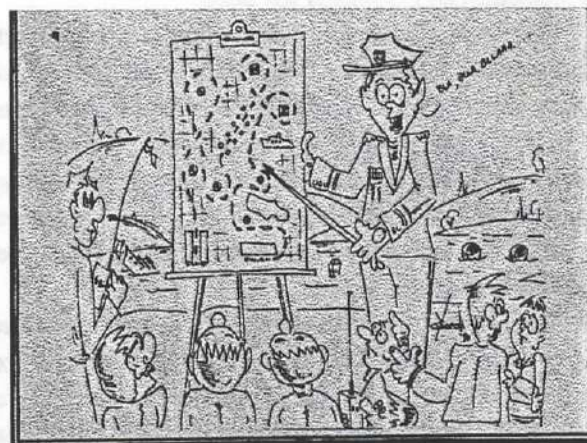
The book has 240 pages of photos, true stories and ship details (well catalogued) of all the vessels that took part in this operation.

Victoria Public Library #940 542

Bookworm



## This month's Funny



"Remember when you could come to the pond and just sail?"



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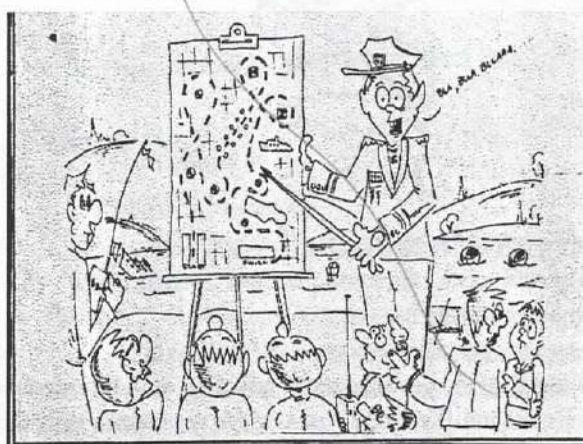
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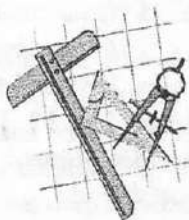
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## Tech Talk

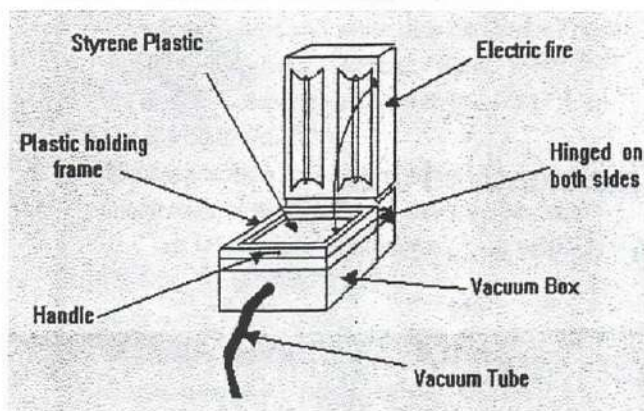
A cheap vacuum forming setup.

Submitted by Dave Powell



When reading one of the U.K. based modeling magazines, I came across the mention in one of the show reviews of a cheap vacuum forming setup. It attracted my interest because it didn't require the use of the domestic oven, with all the disadvantages that entails. In fact, not only can it be easily used in the workshop, the heater unit can double up as a shop-warmer in the winter time.

Basically you make up the normal vacuum box and plastic holding frame. These, instead of being two separate items, are hinged together as a unit, thus ensuring that, not only does the holding frame register accurately with the vacuum box, but when mounted so that when lifted in the upright position, comes directly in front of the electric fire. Then, as soon as the plastic becomes soft enough, one simply closes the frame down onto the vacuum box and switches on the vacuum cleaner, or other means of creating the required suction - as can be seen in the sketch below.



## Maritime Museums of the U.K.

By Ken Lockley

I can't imagine what we modelers would do without maritime museums around the world, from which to draw information when required. These museums give us inspiration to model with more precision and inspire us to do our best. At our last few shows, Canwest and Hillside, it was noticeable that we were seeing a fair number of vessels of British maritime history. To name but a few, Ed Boddaert's new Cornish fishboat, David

Powell's Thames Barge and his recently finished Trinity House pilot boat. There was also Geoff Walton's British Frigate and his Isle of Mann ferry, "Mona's Queen". It's true there is a fair contingent of has been Brits, myself included, who are drawn to British Marine History. The listing below gives info on British Maritime Museums, plus what particular vessel they each are restoring. Our public library has on file the book that this list came from: "The Past Afloat", by Anthony Burton, and I highly recommend it.

Anstruther, Fife

Scottish Fisheries Museum

Harbour Head

*Reaper & Research* in harbour

Bristol, Avon

*SS Great Britain*

Great Western Dock

Gas Ferry Road

National Lifeboat Museum

Princes Wharf

Buckler's Hard, Beaulieu,

Hampshire

Maritime Museum

Coniston, Cumbria

Restored steam launch  
*Gondola*

Cardiff, South Glamorgan

Welsh Industrial and Maritime Museum, Bute Street

Pilot cutter *Kindly Light* and steam tug *Sea Alarm*

Cotehele, Cornwall

Cotehele Quay

Maritime Museum

*Shamrock*

Castletown, Isle of Mann

Nautical Museum

Schooner rigged yacht

*Peggy 1791*

Dundee, Tayside

Victoria Dock

*Unicorn*

Exeter, Devon

Maritime Museum

The Quay. Large collection of vessels from around the world.

Falmouth, Cornwall

*Barnabas*, sailing

details: Maritime

Trust, 16 Ebury St.  
London SW1

Glasgow, Strathclyde

Museum of Transport

25, Albert Drive

collection of ship models

*PS Waverley*, sailing details:

Waverley Terminal,

Stobcross Quay

Gosport, Hampshire

Submarine Museum

*HMS Dolphin* and submarine *Alliance*

Hartlepool, Cleveland

Maritime Museum

Northgate

*HMS Warrior*, Coal

Dock

Great Yarmouth, Norfolk

Maritime Museum for East Anglia

Marine Parade



Hull, Humberside  
Town Docks Museum  
Queen Victoria Square  
Maritime museum mainly  
concerned with fishing.  
*Amy Howson & Comrade*,  
sailing details: Humber Keel &  
Sloop Preservation Society  
Glenlea, Main Rd, New Ellerby,  
Hampshire

London  
*HMS Belfast*  
Symons Wharf, Vine Lane,  
Tooley Street SE1  
*Cutty Sark*, King William Walk,  
Greenwich, SE1 0  
Maritime Trust Historic Ship  
Collection, St. Katherine's by  
the Tower, E1  
National Maritime Museum,  
Romney Rd. Greenwich, SE1 0  
Science Museum, Exhibition Rd. SW1  
*PS Tattersall Castle*, Victoria  
Embankment, SW1

#### Further Reading

ANSON, P.F. *Fishing boats and fisher folk on the east coast of Scotland 1930*. Dent, 1971  
BAXTER, J.P. *The introduction of the ironclad warship*. OUP, 1933  
BIRD, J. *The major seaports of the United Kingdom*. Hutchinson, 1963  
BODY, G. *British paddle steamers* David and Charles, 1971  
BUGLER, A.R. *"HMS Victory": building, restoration and repair HMSO*, 1966  
BUTCHER, D.R. *The driftermen* Tops'l Books, 1979  
CARR, F.G.G. *Sailing barges 1931*. Conway Maritime Press, n.e. 1971  
CORLETT, E. *The iron ship: the history and significance of Brunel's "Great Britain"* Moonraker Press, 1975  
FINCH, R. *Sailing craft of the British Isles* Collins, 1976  
FLETCHER, H. *A life on the Humber* Faber, 1975  
GREENHILL, B. *The merchant schooners 1951* National Maritime Museum, n.e. 1978  
GREENHILL, B. ed. *The ship HMSO for the Maritime Museum, 1980-81* (10 volumes)

Katrine Loch, Central  
*SS Sir Walter Scott*  
regular sailings on Loch  
Information from  
Strathclyde Water Dept.  
419 Balmore Rd. Glasgow  
  
Liverpool, Merseydide  
Merseyside Maritime  
Museum, Pier Head

Lomond Loch, Strathclyde  
*PS Maid of the Loch*  
passenger steamer.  
Sailing details: Caledonian  
MacBrayne, Ferry Terminal  
Gourock, Strathclyde

Morwellham, Devon  
Morwellham Quay dock  
complex and museum  
on Tamar

HOLLAND, A.J. *Ships of British Oak* David & Charles, 1971

HYDE, F.E. *Liverpool and the Mersey* David & Charles, '71

JOHNSTONE, P. *The seacraft of prehistory* Routledge and Kegan Paul, 1980

KEMP, P. *The history of ships* Orbis Books, 1978

KEMP, P. *The Oxford companion to ships and the sea* OUP. 1976

LENTON, H.T. *British submarines* Macdonald, 1972

LONGRIDGE, C.N. *The "Cutty Sark" Model* and Allied Publications, 1975

LYON, D.J. and H.J.L. *World War 11 warships* Orbis Books 1976

MCDONALD, D. *The Clyde puffer* David and Charles, 1977

MACGREGOR, D.R. *Clipper ships* Argus Books, 1979

MALSTER, R. *Wherries and waterways* Dalton, 1971

MARCH, E.G. *Sailing drifters 1952* David & Charles, '69

NATIONAL MARITIME MUSEUM *Three major ancient boat finds in Britain* The Museum, 1972

PATTERSON, A.J.S. *The golden years of the Clyde steamer 1889-1914* David and Charles, 1969

RITCHIE-NOAKES, N. *Jesse Hartley* Merseyside County Museums, 1980

SLADE, W.J. and GREENHILL, B. *Westcountry coasting ketches* Conway Maritime Press, 1974

UDEN, G. and COOPER, R. *A dictionary of British ships and seamen* Kestrel Books, 1980

UNGER, R.W. *The ship in the medieval economy, 600-1600* Croom Helm, 1980

WATTS, A.J. *Allied submarines* Macdonald and Jane's, 1977

ed. Note Thanks to Ken Lockley for these lists.

## Classified

### Photoetch anyone?

Ron Hillsden has obtained a couple of yards of Morton uncured laminar photoresist from Randy Gordon-Gilmore, THE GURU of doityourself photoetching.

Ron would like some assistance, encouragement or whatever as he experiments with this stuff. If you want to play, please see Ron.

Related to this, he also needs a small cheap plastics laminator and a couple of small chemical pumps. If anyone has one surplus, or knows where they can be obtained locally, please speak up! Thanks.





Burnaby Association of Marine Modelers  
Presents

# REGATTA '98

Sunday, August 9<sup>th</sup> at 10:00AM

Tugs, Warships, Merchant Ships, Fish Boats, Pleasure Craft and Submarines.. For Info. call John Tarvin - 437-8217

Races will be held for model sailing yachts as well as Crackerbox and monohull fastelectric model boats. For racing information call Cyril White - 526-0279

## SEASPAN CHALLENGE CUP

Sponsored by Seaspans International

Saturday, August 8<sup>th</sup> @ 9:00am on the lower pond in Vanier Park, Vancouver (Maritime Museum). Bring your model Tug boat and test your skill at Tug Handling.

For Information contact Brian Dean @ 572-7630



Dale Pearson

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